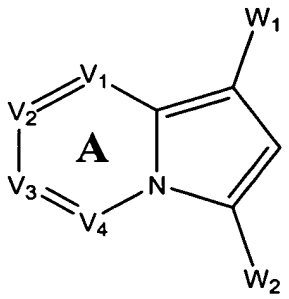
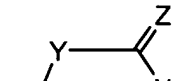
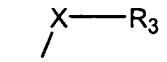
**WE CLAIM:**

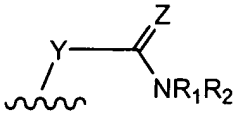
1. A compound of Formula (I):




(I)

wherein:

one of $W_1$ and $W_2$ is  and the other is  ;

$V_1$, $V_2$, $V_3$ and $V_4$ are independently $CR_6$ or N; or alternatively, $V_1$ and $V_2$ taken together or $V_3$ and $V_4$ taken together may be replaced with S, O, or $NR_7$ to form a fused 5-membered heterocyclic ring, and wherein two adjacent positions on Ring **A** may optionally be joined to create a fused aryl group, provided that when $W_1$ is  , $V_1$, $V_2$, $V_3$ and $V_4$ may not all be $CR_6$;

X is a covalent bond, $-C(R_4R_5)-$, $-N(R_4)-$, -O-, -S-, -S(O)-, $-S(O)_2-$, $-C(=O)-$, $-C(=O)-N(R_4)-$, or $-N(R_4)-C(=O)-$;

Y is $-C(R_4R_5)-$, $-N(R_4)-$, -O-, -S-, -S(O)-, $-S(O)_2-$, $-C(=O)-$, $-C(=S)-$, $-C(=O)-N(R_4)-$, $-C(=N-OR_8)-$, $-C(=N-R_8)-$, or $-N(R_4)-C(=O)-$;

Z is =O, =S, $=N-OR_8$ or $=NR_8$;

$R_1$ and $R_2$ are independently -H, an unsubstituted aliphatic group, a substituted aliphatic group, an unsubstituted non-aromatic heterocylic group, a substituted non-aromatic heterocylic group, an unsubstituted aryl group or a substituted aryl group, or alternatively, $NR_1R_2$, taken together, is a substituted or unsubstituted non-aromatic nitrogen-containing heterocyclic group or a substituted or unsubstituted nitrogen-containing heteroaryl group;

$R_3$ is a substituted or unsubstituted aryl group or a substituted or unsubstituted aliphatic group;

each $R_4$ and $R_5$ is independently -H or a substituted or unsubstituted aliphatic group;

each $R_6$ is independently –H or a Ring **A** substituent;

each $R_7$ is independently -H or a heteroaryl ring nitrogen substituent and

each $R_8$ is independently –H, an unsubstituted aliphatic group, a substituted aliphatic group, an unsubstituted non-aromatic heterocylic group, a substituted non-aromatic heterocylic group, an unsubstituted aryl group, or a substituted aryl group;

and pharmaceutically acceptable salts and prodrugs thereof.

2. The compound according to claim 1, wherein

X is $-C(R_4R_5)-$, $-N(R_4)-$, -C(=O)- or -O-;

Y is $-C(R_4R_5)-$ or C=O;

Z is =O;

$R_1$ is -H;

$R_2$ is a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group;

$R_3$ is a substituted or unsubstituted aryl group;

$R_6$ is independently selected from H, halo, $-C_1-C_4$ alkyl, $-C_1-C_4$ alkoxy, $-C_1-C_4$ haloalkyl, $C_1-C_4$ haloalkoxy, $-C_1-C_4$ acyl, amido, substituted amido, $-NO_2$, -CN,-OH, $-NH_2$ and substituted amino; and

each $R_8$ is independently –H or a substituted or unsubstituted aliphatic group.

3. The compound according to claim 2, wherein:

X is $-CH_2-$, -CH(lower alkyl)-, -NH-, -N(lower alkyl)-, -C(=O)- or -O-;

Y is C=O;

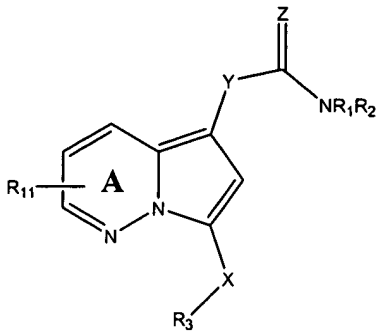
$R_2$ is an unsubstituted aryl group or an aryl group substituted with lower alkyl, amido, cyano or halo;

$R_3$ is a substituted or unsubstituted phenyl, pyridyl or thienyl group;

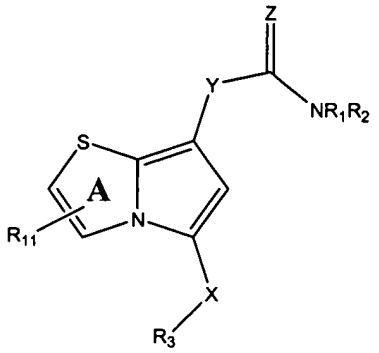
$R_4$ and $R_5$ are both H; and

each $R_8$ is independently –H or a substituted or unsubstituted lower alkyl.

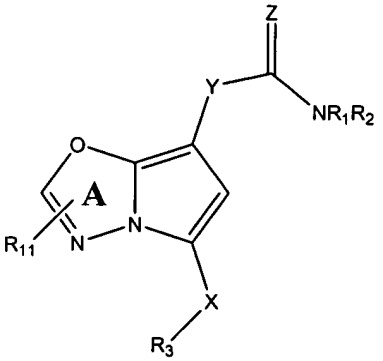
4. The compound according to claim 1, having the structure of Formula (Ia), (Ib), (Ic), (Id), (Ie), (If) or (Ig):



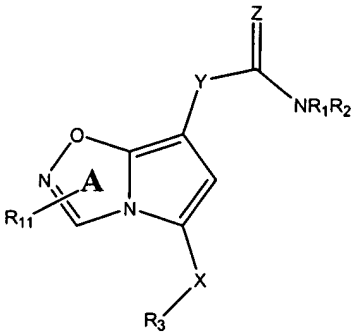
Formula (Ia)



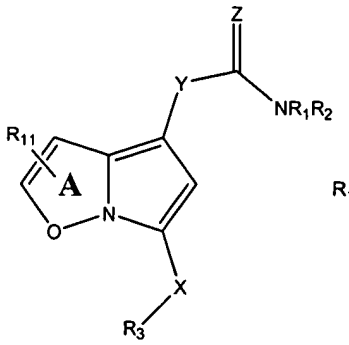
Formula (Ib)



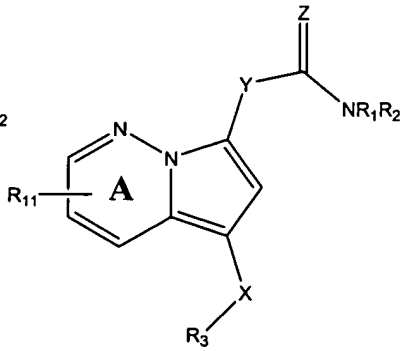
Formula (Ic)



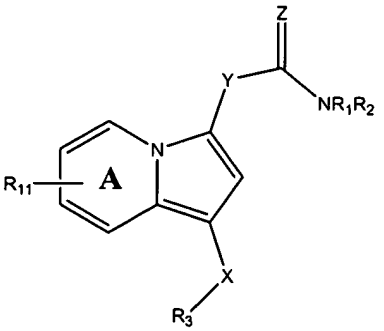
Formula (Id)



Formula (Ie)



Formula (If)



Formula (Ig)

wherein X is a covalent bond, -C($R_4R_5$) -, -N($R_4$)-, -O-, -S-, -S(O)-, -S$(O)_2$-, -C(=O)-, -C(=O)-N($R_4$)-, or -N($R_4$)-C(=O)-;

Y is $-C(R_4R_5)-$, $-N(R_4)-$, -O-, -S-, $-S(O)-$, $-S(O)_2-$, $-C(=O)-$, $-C(=S)-$, $-C(=O)-N(R_4)-$, $-C(=N-OR_8)-$, $-C(=N-R_8)-$, or $-N(R_4)-C(=O)-$;

Z is =O, =S, $=N-OR_8$ or $=NR_8$;

$R_1$ and $R_2$ are independently -H, an unsubstituted aliphatic group, a substituted aliphatic group, an unsubstituted non-aromatic heterocylic group, a substituted non-aromatic heterocylic group, an unsubstituted aryl group or a substituted aryl group; or alternatively, $NR_1R_2$, taken together, is a substituted or unsubstituted non-aromatic nitrogen-containing heterocyclic group or a substituted or unsubstituted nitrogen-containing heteroaryl group;

$R_3$ is a substituted or unsubstituted aryl group or a substituted or unsubstituted aliphatic group;

each $R_4$ and $R_5$ is independently -H or a substituted or unsubstituted aliphatic group;

each $R_8$ is independently –H, an unsubstituted aliphatic group, a substituted aliphatic group, an unsubstituted non-aromatic heterocylic group, a substituted non-aromatic heterocylic group, an unsubstituted aryl group, or a substituted aryl group;

each $R_{11}$ is independently selected from Ring A substituents (preferably, selected from the group consisting of H, hydroxyl, cyano, nitro, halo, a substituted or unsubstituted amino group, a substituted or unsubstituted acyl group, a substituted or unsubstituted amido group, a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkoxy group, or a substituted or unsubstituted aryl group; and

pharmaceutically acceptable salts and prodrugs thereof.

5. The compound according to claim 4, wherein

X is $-C(R_4R_5)-$, $-N(R_4)-$, $-C(=O)-$ or -O-;

Y is $-C(R_4R_5)-$ or C=O;

Z is =O;

$R_1$ is -H;

$R_2$ is a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group;

$R_3$ is a substituted or unsubstituted aryl group; and

each $R_8$ is independently –H or a substituted or unsubstituted aliphatic group.

6. The compound according to claim 3, wherein:

X is -$CH_2$-, -CH(lower alkyl)-, -NH-, -N(lower alkyl)-, -C(=O)- or -O-;

Y is C=O;

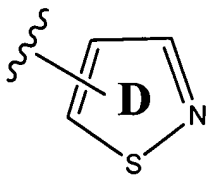
$R_2$ is an unsubstituted aryl group or an aryl group substituted with lower alkyl, amido, cyano or halo;

$R_3$ is a substituted or unsubstituted phenyl, pyridyl or thienyl group;

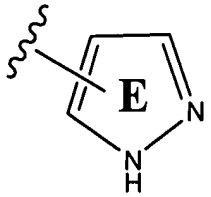
$R_4$ and $R_5$ are both H; and

each $R_8$ is independently –H or a substituted or unsubstituted lower alkyl.

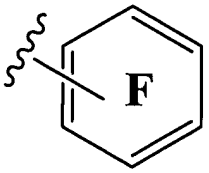
7. The compound according to claim 1, wherein $R_2$ is selected from the group consisting of Formulas (II)-(XV):



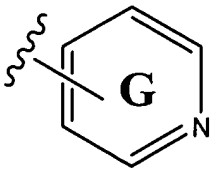

(II)



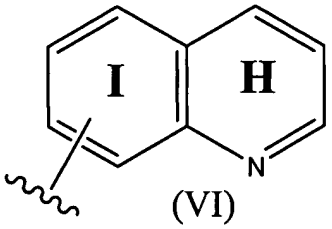

(III)



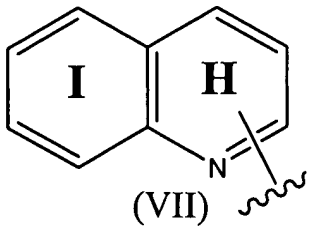

(IV)



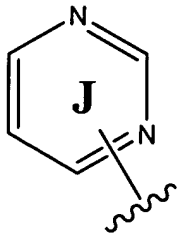

(V)



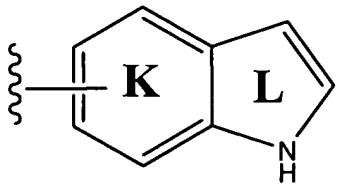

(VI)



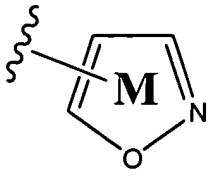

(VII)



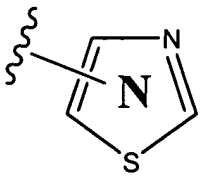

(VIII)



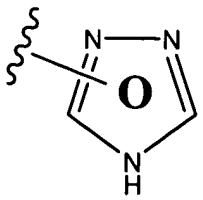

(IX)



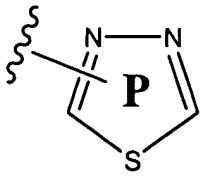

(X)



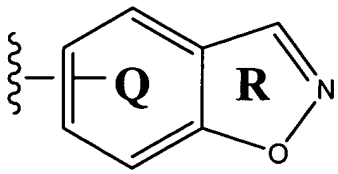

(XI)



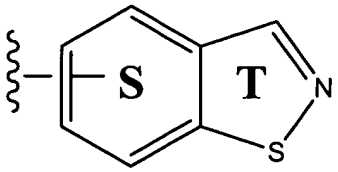

(XII)




(XIII)



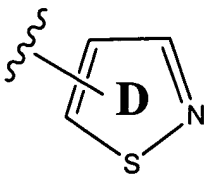

(XIV)



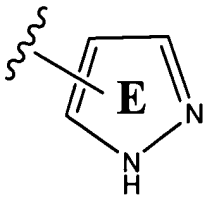

(XV)

wherein each of rings Rings **D-T** may be substituted or unsubstituted.

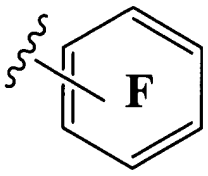
8. The compound according to claim 4, wherein $R_2$ is selected from the group consisting of Formulas (II)-(XV):



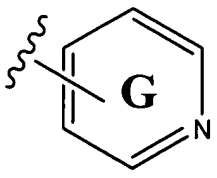

(II)



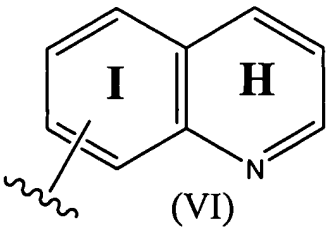

(III)



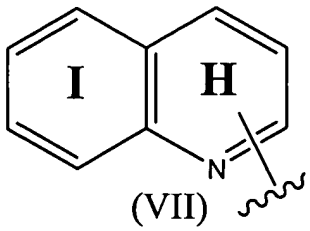

(IV)



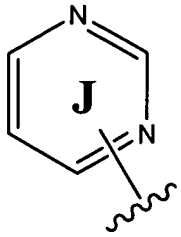

(V)



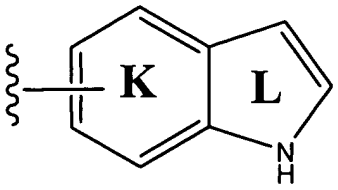

(VI)



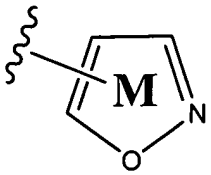

(VII)



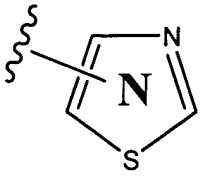

(VIII)



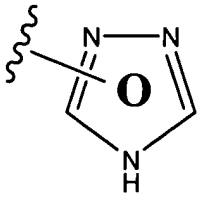

(IX)



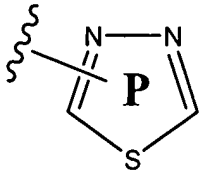

(X)



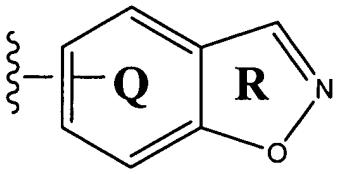

(XI)



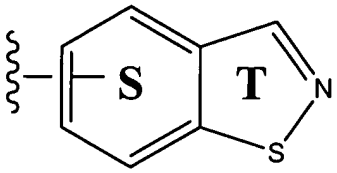

(XII)




(XIII)



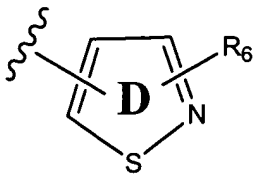

(XIV)



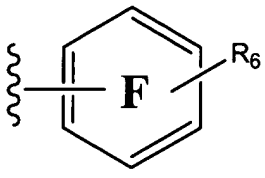

(XV)

wherein each of rings Rings **D-T** may be substituted or unsubstituted.

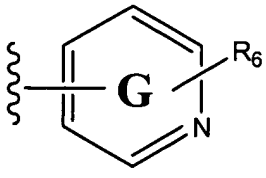
9. The compound according to claim 7, wherein $R_2$ is selected from Formulas (XVI)-(XXI):



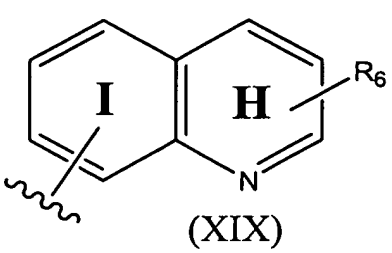

(XVI)



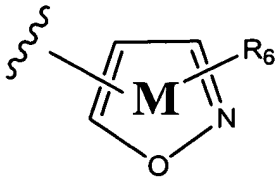

(XVII)



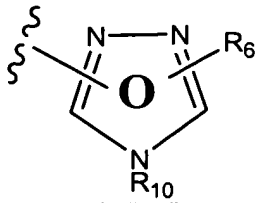

(XVIII)




(XIX)




(XX)



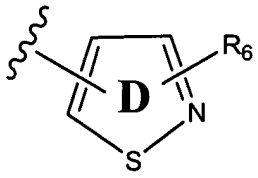

(XXI)

wherein

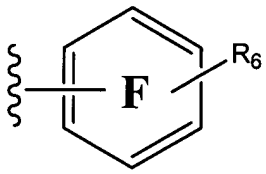
each $R_6$ is independently selected from the group consisting of H, hydroxyl, cyano, nitro, halo, a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkoxy group, or a substituted or unsubstituted aryl group; and

$R_{10}$ is -H or a substituted or unsubstituted alkyl group.

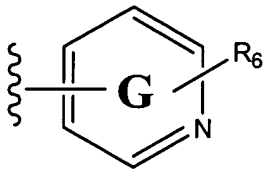
10. The compound according to claim 8, wherein $R_2$ is selected from Formulas (XVI)-(XXI):



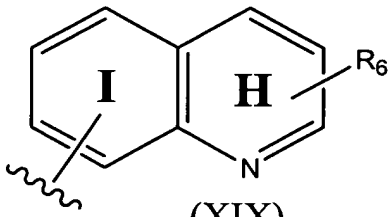

(XVI)



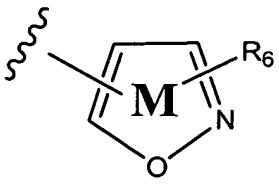

(XVII)



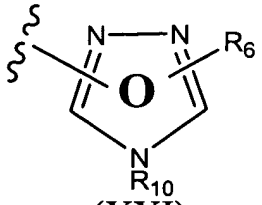

(XVIII)




(XIX)




(XX)



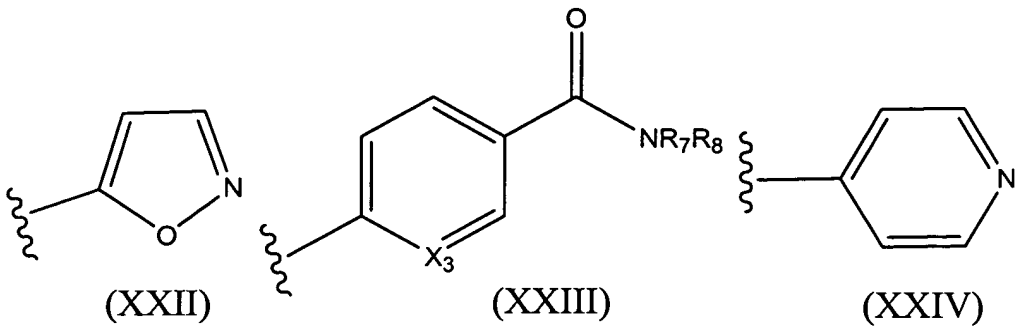

(XXI)

wherein

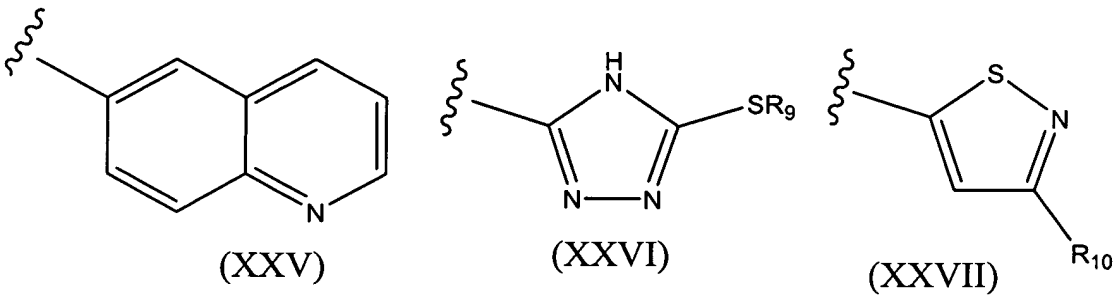
each $R_6$ is independently selected from the group consisting of H, hydroxyl, cyano, nitro, halo, a substituted or unsubstituted alkyl group, a substituted or unsubstituted alkoxy group, or a substituted or unsubstituted aryl group; and

$R_{10}$ is -H or a substituted or unsubstituted alkyl group.

11. The compound according to claim 9, wherein $R_2$ is selected from Formulas (XXII)-(XXVII):




(XXII) (XXIII) (XXIV)




(XXV) (XXVI) (XXVII)

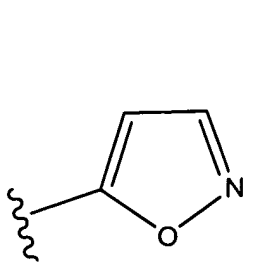
wherein $X_3$ is -CH- or -N-;

$R_7$ and $R_8$ are independently -H or an alkyl group or alternatively,-$NR_7R_8$, taken together, is a nitrogen-containing non-aromatic heterocyclic group;

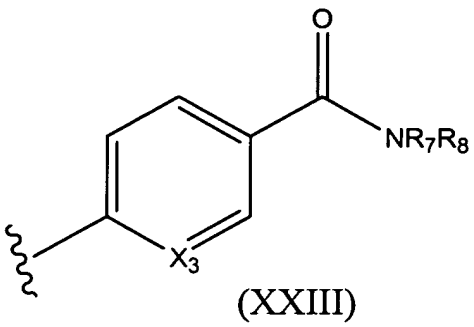
$R_9$ is an alkyl group; and

$R_{10}$ is -H or an alkyl group.

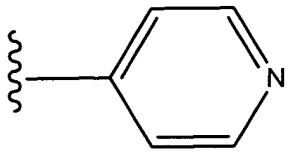
12. The compound according to claim 10, wherein $R_2$ is selected from Formulas (XXII)-(XXVII):



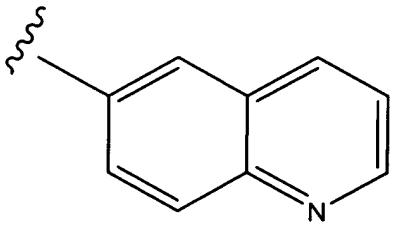

(XXII)



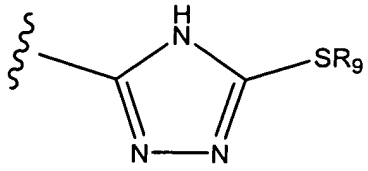

(XXIII)



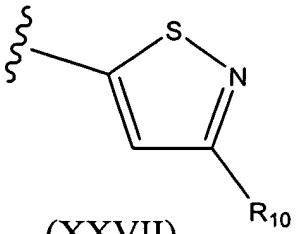

(XXIV)




(XXV)




(XXVI)




(XXVII)

wherein $X_3$ is -CH- or -N-;

$R_7$ and $R_8$ are independently -H or an alkyl group or alternatively,-$NR_7R_8$, taken together, is a nitrogen-containing non-aromatic heterocyclic group;

$R_9$ is an alkyl group; and

$R_{10}$ is -H or an alkyl group.

13. A compound selected from the group consisting of Compounds (I-1) through (I-14).

14. A pharmaceutical composition comprising at least one compound according to claim 1 and a pharmaceutically acceptable carrier.

15. The pharmaceutical composition of claim 14, further comprising one or more additional therapeutic agents.

16. The pharmaceutical composition of claim 15, wherein the additional therapeutic agent is an agent against cancer agent, an autoimmune disease, an inflammatory disorder or pain.

17. A method for treating cancer, an inflammatory disorder or an autoimmune disease comprising the step of administering to a subject in need thereof an effective amount of the pharmaceutical composition according to claim 14.

18. A method for preventing cancer, an inflammatory disorder or an autoimmune disease comprising the step of administering to a subject in need thereof an effective amount of the pharmaceutical composition according to claim 14.

19. A method for preventing or treating a disorder involving PDE4 or elevated levels of cytokines comprising the step of administering to a subject in need thereof an effective amount of the pharmaceutical composition according to claim 14.

20. The method according to claim 19, wherein the disorder is characterized, mediated or exacerbated by overproduction or activity of TNF$\alpha$.

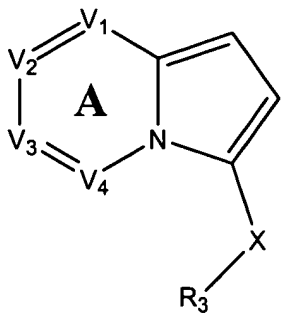
21. The method according to claim 19, wherein the disorder is characterized, mediated or exacerbated by overproduction or activity of PDE4.

22. A method of inhibiting TNF$\alpha$ or PDE4 in a cell comprising the step of contacting the cell with an effective amount of a compound according to claim 1.

23. A method for reducing TNF$\alpha$ levels in a subject comprising administering to the subject an effective amount of a compound according to claim 1.

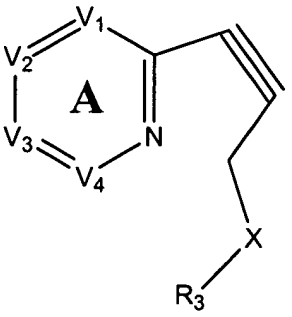
24. A method for suppressing inflammatory cell activation comprising the step of contacting the cell with an effective amount of a compound according to claim 1.

25. A method of preparing a compound of Formula ($I_{INT-A}$):




($I_{INT-A}$)

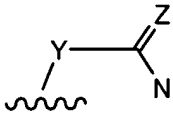
comprising the step of reacting a $Cu^{I}$ salt with a precursor compound represented by Formula ($I_{INT-B}$):




($I_{INT-B}$)

wherein

$V_1$, $V_2$, $V_3$ and $V_4$ are independently $CR_6$ or N; or alternatively, $V_1$ and $V_2$ taken together or $V_3$ and $V_4$ taken together may be replaced with S, O, or $NR_7$ to form a fused 5-membered heterocyclic ring, and wherein two adjacent positions on Ring **A** may optionally be joined to create a fused aryl group, provided that when $W_1$ is




, $V_1$, $V_2$, $V_3$ and $V_4$ may not all be $CR_6$;

X is a covalent bond, $-C(R_4R_5)-$, $-N(R_4)-$, -O-, -S-, $-S(O)-$, $-S(O)_2-$, $-C(=O)-$, $-C(=O)-N(R_4)-$, or $-N(R_4)-C(=O)-$;

Y is $-C(R_4R_5)-$, $-N(R_4)-$, -O-, -S-, $-S(O)-$, $-S(O)_2-$, $-C(=O)-$, $-C(=S)-$, $-C(=O)-N(R_4)-$, $-C(=N-OR_8)-$, $-C(=N-R_8)-$, or $-N(R_4)-C(=O)-$;

Z is =O, =S, $=N-OR_8$ or $=NR_8$;

$R_1$ and $R_2$ are independently -H, an unsubstituted aliphatic group, a substituted aliphatic group, an unsubstituted non-aromatic heterocylic group, a substituted non-aromatic heterocylic group, an unsubstituted aryl group or a substituted aryl group; or alternatively, $NR_1R_2$, taken together, is a substituted or unsubstituted non-aromatic nitrogen-containing heterocyclic group or a substituted or unsubstituted nitrogen-containing heteroaryl group;

$R_3$ is a substituted or unsubstituted aryl group or a substituted or unsubstituted aliphatic group, provided that $R_3$ is not a substituted or unsubstituted alkyl group;

each $R_4$ and $R_5$ is independently -H or a substituted or unsubstituted aliphatic group;

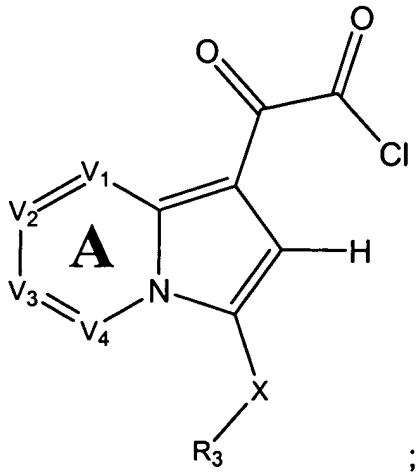
each $R_6$ is independently –H or a Ring **A** substituent;

each $R_7$ is independently -H or a heteroaryl ring nitrogen substituent; and

each $R_8$ is independently –H, an unsubstituted aliphatic group, a substituted aliphatic group, an unsubstituted non-aromatic heterocylic group, a substituted non-aromatic heterocylic group, an unsubstituted aryl group, or a substituted aryl group.

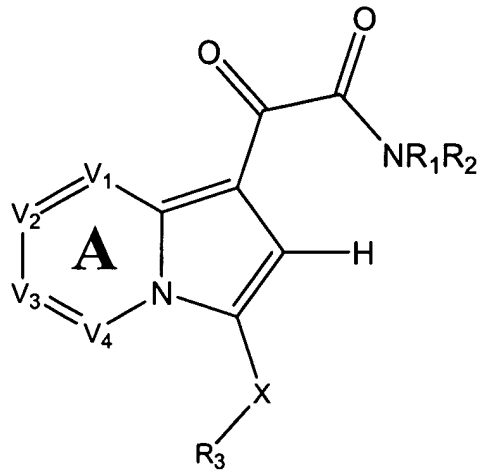
26. The method of claim 25, further comprising the steps of:

a) reacting the compound of Formula ($I_{INT-A}$) with oxalyl chloride to form a product compound represented by the following structural formula:

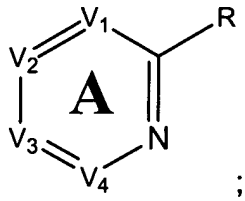



; and

b) amidating the product compound with $NHR_1R_2$ to form a second product compound represented by the following formula:

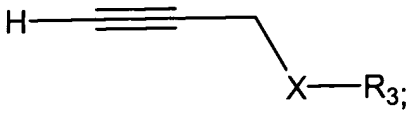



27. The method of Claim 25, wherein the compound of Formula ($I_{INT-B}$) is prepared by reacting a pyridine starting compound and an alkyne starting material in the presence of a catalytic amount of a palladium$^{II}$ salt and a Cu$^{I}$ salt, wherein the starting compound is represented by the following structural formula:



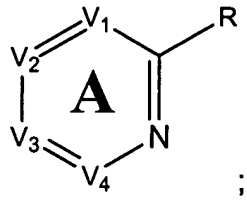

;

the alkyne starting material is represented by the following structural formula:



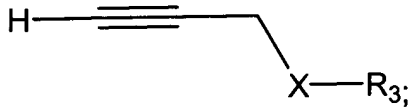

and R is -Br or -I.

28. The method of Claim 26, wherein the compound of Formula ($I_{INT-B}$) is prepared by reacting a pyridine starting compound and an alkyne starting material in the presence of a catalytic amount of a palladium$^{II}$ salt and a Cu$^{I}$ salt, wherein the starting compound is represented by the following structural formula:




;

the alkyne starting material is represented by the following structural formula:




and R is -Br or -I.